

Sequence Listing

<110> Baker, Kevin
Botstein, David
Eaton, Dan
Ferrara, Napoleone
Filvaroff, Ellen
Gerritsen, Mary
Goddard, Audrey
Godowski, Paul
Grimaldi, Christopher
Gurney, Austin
Hillan, Kenneth
Kljavin, Ivar
Napier, Mary
Roy, Margaret
Tumas, Daniel
Wood, William

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35 40 45
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50 55 60
Pro Arg Ser His Phe Phe Pro Phe Asp Leu Phe Pro Met Cys Pro
65 70 75
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80 85 90
Gly Leu Thr Ser Val Pro Thr Asn Ile Pro Phe Asp Thr Arg Met
95 100 105
Leu Asp Leu Gln Asn Asn Lys Ile Lys Glu Ile Lys Glu Asn Asp
110 115 120
Phe Lys Gly Leu Thr Ser Leu Tyr Gly Leu Ile Leu Asn Asn Asn
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140 145 150
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170 175 180
Lys Val Lys Lys Ile Gln Lys Asp Thr Phe Lys Gly Met Asn Ala
185 190 195
Leu His Val Leu Glu Met Ser Ala Asn Pro Leu Asp Asn Asn Gly
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245 250 255
Glu Leu Glu Asp Phe Lys Arg Tyr Lys Glu Leu Gln Arg Leu Gly
260 265 270
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275 280 285
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335 340 345
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50 55 60
Asp Glu Thr Trp His Pro Asp Leu Gly Gln Pro Phe Gly Val Met
65 70 75

Arg Cys Val Leu Cys Ala Cys Glu Ala Pro Gln Trp Gly Arg Arg
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95 100 105
Cys Pro Thr Pro Ala Cys Gly Gln Pro Arg Gln Leu Pro Gly His
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125 130 135
Pro Ser Gly Leu Ser Phe Glu Tyr Pro Arg Asp Pro Glu His Arg
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Arg Glu Leu Gln Ala Asn Val Ser Ala Gln Glu Pro Gly Phe Ala
350 355 360
Glu Val Leu Pro Asn Leu Thr Val Gln Glu Met Asp Trp Leu Val

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380	385	390
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395	400	405
Leu Gln Ser Val Leu Cys Gly Ala Asp Ala Leu Ile Pro Val Gln		
410	415	420
Thr Gly Ala Ala Gly Ser Ala Ser Leu Thr Leu Leu Gly Asn Gly		
425	430	435
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455	460	465
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Gly His Ser Ala Arg His Asp Thr Leu Pro Val Pro Leu Ala Gly		
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Trp Leu Ser Leu Asp Thr His Cys His Leu His Tyr Glu Val Leu		
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590	595	600
Gly Phe Tyr Gly Ser Glu Ala Gln Gly Val Val Lys Asp Leu Glu		
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695 700 705
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710 715 720
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725 730 735
Val Ile Cys Asp Pro Val Val Cys Pro Pro Pro Ser Cys Pro His
740 745 750
Pro Val Gln Ala Pro Asp Gln Cys Cys Pro Val Cys Pro Glu Lys
755 760 765
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770 775 780
Gly Glu Gly Cys Tyr Phe Asp Gly Asp Arg Ser Trp Arg Ala Ala
785 790 795
Gly Thr Arg Trp His Pro Val Val Pro Pro Phe Gly Leu Ile Lys
800 805 810
Cys Ala Val Cys Thr Cys Lys Gly Gly Thr Gly Glu Val His Cys
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Glu Lys Val Gln Cys Pro Arg Leu Ala Cys Ala Gln Pro Val Arg
830 835 840
Val Asn Pro Thr Asp Cys Cys Lys Gln Cys Pro Val Gly Ser Gly
845 850 855
Ala His Pro Gln Leu Gly Asp Pro Met Gln Ala Asp Gly Pro Arg
860 865 870
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875 880 885
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cttaactctg gtggtaagg tcagcacctg tgtgccgggg gagagtcacg 1050

caaatgactt ggagtgttca ggaaaaggaa aatgcaccac gaagccgtca 1100
gaggcaactt tttcctgtac ctgtgaggag cagtagtgg gtactttctg 1150
tgaagaatac gatgcttgcc agagggaaacc ttgccaaaac aacgcgagct 1200
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ccaaccatata tgaataaaatg tgcataagtc a 3231

<210> 15

<211> 737

<212> PRT

<213> Homo Sapien

<400> 15

Met Gln Pro Arg Arg Ala Gln Ala Pro Gly Ala Gln Leu Leu Pro
1 5 10 15

Ala Leu Ala Leu Leu Leu Leu Leu Gly Ala Gly Pro Arg Gly
20 25 30

Ser Ser Leu Ala Asn Pro Val Pro Ala Ala Pro Leu Ser Ala Pro
35 40 45

Gly Pro Cys Ala Ala Gln Pro Cys Arg Asn Gly Gly Val Cys Thr
50 55 60

Ser Arg Pro Glu Pro Asp Pro Gln His Pro Ala Pro Ala Gly Glu
65 70 75

Pro Gly Tyr Ser Cys Thr Cys Pro Ala Gly Ile Ser Gly Ala Asn
80 85 90

Cys Gln Leu Val Ala Asp Pro Cys Ala Ser Asn Pro Cys His His
95 100 105

Gly Asn Cys Ser Ser Ser Ser Ser Ser Asp Gly Tyr Leu

110	115	120
Cys Ile Cys Asn Glu Gly Tyr Glu Gly Pro Asn Cys Glu Gln Ala		
125	130	135
Leu Pro Ser Leu Pro Ala Thr Gly Trp Thr Glu Ser Met Ala Pro		
140	145	150
Arg Gln Leu Gln Pro Val Pro Ala Thr Gln Glu Pro Asp Lys Ile		
155	160	165
Leu Pro Arg Ser Gln Ala Thr Val Thr Leu Pro Thr Trp Gln Pro		
170	175	180
Lys Thr Gly Gln Lys Val Val Glu Met Lys Trp Asp Gln Val Glu		
185	190	195
Val Ile Pro Asp Ile Ala Cys Gly Asn Ala Ser Ser Asn Ser Ser		
200	205	210
Ala Gly Gly Arg Leu Val Ser Phe Glu Val Pro Gln Asn Thr Ser		
215	220	225
Val Lys Ile Arg Gln Asp Ala Thr Ala Ser Leu Ile Leu Leu Trp		
230	235	240
Lys Val Thr Ala Thr Gly Phe Gln Gln Cys Ser Leu Ile Asp Gly		
245	250	255
Arg Ser Val Thr Pro Leu Gln Ala Ser Gly Gly Leu Val Leu Leu		
260	265	270
Glu Glu Met Leu Ala Leu Gly Asn Asn His Phe Ile Gly Phe Val		
275	280	285
Asn Asp Ser Val Thr Lys Ser Ile Val Ala Leu Arg Leu Thr Leu		
290	295	300
Val Val Lys Val Ser Thr Cys Val Pro Gly Glu Ser His Ala Asn		
305	310	315
Asp Leu Glu Cys Ser Gly Lys Gly Lys Cys Thr Thr Lys Pro Ser		
320	325	330
Glu Ala Thr Phe Ser Cys Thr Cys Glu Glu Gln Tyr Val Gly Thr		
335	340	345
Phe Cys Glu Glu Tyr Asp Ala Cys Gln Arg Lys Pro Cys Gln Asn		
350	355	360
Asn Ala Ser Cys Ile Asp Ala Asn Glu Lys Gln Asp Gly Ser Asn		
365	370	375
Phe Thr Cys Val Cys Leu Pro Gly Tyr Thr Gly Glu Leu Cys Gln		
380	385	390
Ser Lys Ile Asp Tyr Cys Ile Leu Asp Pro Cys Arg Asn Gly Ala		
395	400	405

Thr Cys Ile Ser Ser Leu Ser Gly Phe Thr Cys Gln Cys Pro Glu
410 415 420

Gly Tyr Phe Gly Ser Ala Cys Glu Glu Lys Val Asp Pro Cys Ala
425 430 435

Ser Ser Pro Cys Gln Asn Asn Gly Thr Cys Tyr Val Asp Gly Val
440 445 450

His Phe Thr Cys Asn Cys Ser Pro Gly Phe Thr Gly Pro Thr Cys
455 460 465

Ala Gln Leu Ile Asp Phe Cys Ala Leu Ser Pro Cys Ala His Gly
470 475 480

Thr Cys Arg Ser Val Gly Thr Ser Tyr Lys Cys Leu Cys Asp Pro
485 490 495

Gly Tyr His Gly Leu Tyr Cys Glu Glu Glu Tyr Asn Glu Cys Leu
500 505 510

Ser Ala Pro Cys Leu Asn Ala Ala Thr Cys Arg Asp Leu Val Asn
515 520 525

Gly Tyr Glu Cys Val Cys Leu Ala Glu Tyr Lys Gly Thr His Cys
530 535 540

Glu Leu Tyr Lys Asp Pro Cys Ala Asn Val Ser Cys Leu Asn Gly
545 550 555

Ala Thr Cys Asp Ser Asp Gly Leu Asn Gly Thr Cys Ile Cys Ala
560 565 570

Pro Gly Phe Thr Gly Glu Glu Cys Asp Ile Asp Ile Asn Glu Cys
575 580 585

Asp Ser Asn Pro Cys His His Gly Gly Ser Cys Leu Asp Gln Pro
590 595 600

Asn Gly Tyr Asn Cys His Cys Pro His Gly Trp Val Gly Ala Asn
605 610 615

Cys Glu Ile His Leu Gln Trp Lys Ser Gly His Met Ala Glu Ser
620 625 630

Leu Thr Asn Met Pro Arg His Ser Leu Tyr Ile Ile Ile Gly Ala
635 640 645

Leu Cys Val Ala Phe Ile Leu Met Leu Ile Ile Leu Ile Val Gly
650 655 660

Ile Cys Arg Ile Ser Arg Ile Glu Tyr Gln Gly Ser Ser Arg Pro
665 670 675

Ala Tyr Glu Glu Phe Tyr Asn Cys Arg Ser Ile Asp Ser Glu Phe
680 685 690

Ser Asn Ala Ile Ala Ser Ile Arg His Ala Arg Phe Gly Lys Lys

695

700

705

Ser Arg Pro Ala Met Tyr Asp Val Ser Pro Ile Ala Tyr Glu Asp
710 715 720

Tyr Ser Pro Asp Asp Lys Pro Leu Val Thr Leu Ile Lys Thr Lys
725 730 735

Asp Leu

<210> 16

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 16

tgtaaaacga cggccagttt aatagacctg caattattaa tct 43

<210> 17

<211> 41

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 17

cagggaaacag ctatgaccac ctgcacacacct gcaaattccat t 41

<210> 18

<211> 508

<212> DNA

<213> Homo Sapien

<400> 18

ctctggaagg tcacggccac aggattccaa cagtgcctcc tcatagatgg 50

acgaaagtgt gacccccc tt tcaggctt tc agggggactg gtcctcctgg 100

aggagatgct cgccttgggg aataatcaact ttattggttt tgtgaatgat 150

tctgtgacta agtctattgt ggctttgcgc ttaactctgg tggtaaggt 200

cagcacctgt gtgccgggg agagtcacgc aaatgacttg gagtgttcag 250

gaaaaggaaa atgcaccacg aagccgtcag aggcaacttt ttcctgtacc 300

tgtgaggagc agtacgtggg tactttctgt gaagaatacg atgcttgcca 350

gagggaaacct tgccaaaaca acgcgagctg tattgatgca aatgaaaagc 400

aagatgggag caatttacc tttgtttgcc ttcctggta tactggagag 450

ctttgccaac cgaactgaga ttggagcgaa cgacctacac cgaactgaga 500

taggggag 508

<210> 19

<211> 508

<212> DNA

<213> Homo Sapien

<400> 19

ctctggaagg tcacggccac aggattccaa cagtgcctcc tcatacatgg 50

acgaaagtgt gacccccc tt tcaggcttc agggggactg gtcctcctgg 100

aggagatgtc cgcccttgggg aataatcaact ttattggttt tgtgaatgat 150

tctgtgacta agtctattgt ggcttgcgc ttaactctgg tggtaaggt 200

cagcacctgt gtgccggggg agagtcacgc aaatgacttg gagtgttcag 250

gaaaaggaaa atgcaccacg aagccgtcag aggcaacttt ttccctgtacc 300

tgtgaggagc agtacgtggg tactttctgt gaagaatacg atgcttgcca 350

gaggaaacct tgccaaaaca acgcgagctg tattgatgca aatgaaaagc 400

aagatggag caatttcacc tgtgtttgcc ttccctggta tactggagag 450

cttgc当地 cgaactgaga ttggagcga cgaacctacac cgaactgaga 500

taggggag 508

<210> 20

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 20

ctctggaagg tcacggccac agg 23

<210> 21

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 21

ctcagttcgg ttggcaaagc tctc 24

<210> 22

<211> 69

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 22

cagtgcctcc tcatacatgg acgaaagtgt gaccccccctt tcaggcgaga 50
gctttgccaa ccgaactga 69

<210> 23

<211> 1520

<212> DNA

<213> Homo Sapien

<400> 23

gctgagtctg ctgctcctgc tgctgctgct ccagcctgta acctgtgcct 50
acaccacgccc agggcccccc agagccctca ccacgctggg cgcccccaaga 100
gcccacacca tgccgggcac ctacgctccc tcgaccacac tcagtagtcc 150
cagcacccag ggcctgcaag agcaggcacg ggccctgatg cgggacttcc 200
cgctcgtgga cggccacaac gacctgcccc tggccttaag gcaggtttac 250
cagaaagggc tacaggatgt taacctgcgc aatttcagct acggccagac 300
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cctatgtgcc atgccagacc caggaccggg atgccctgcg cctcaccctg 400
gagcagattg acctcatacg ccgcatagtgt gcctcctatt ctgagctgga 450
gcttgtgacc tcggctaaag ctctgaacga cactcagaaa ttggcctgcc 500
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tgtggctctg atgacccagt tagtcctgcc agatgtcact gtagcaagcc 1450
acagacaccc cacaaggatc ccctgttgtg caggcacaaa tatttcctga 1500
aataaatgtt ttggacatag 1520

<210> 24

<211> 433

<212> PRT

<213> Homo Sapien

<400> 24

Met Pro Gly Thr Tyr Ala Pro Ser Thr Thr Leu Ser Ser Pro Ser
1 5 10 15

Thr Gln Gly Leu Gln Glu Gln Ala Arg Ala Leu Met Arg Asp Phe
20 25 30

Pro Leu Val Asp Gly His Asn Asp Leu Pro Leu Val Leu Arg Gln
35 40 45

Val Tyr Gln Lys Gly Leu Gln Asp Val Asn Leu Arg Asn Phe Ser
50 55 60

Tyr Gly Gln Thr Ser Leu Asp Arg Leu Arg Asp Gly Leu Val Gly
65 70 75

Ala Gln Phe Trp Ser Ala Tyr Val Pro Cys Gln Thr Gln Asp Arg
80 85 90

Asp Ala Leu Arg Leu Thr Leu Glu Gln Ile Asp Leu Ile Arg Arg
95 100 105

Met Cys Ala Ser Tyr Ser Glu Leu Glu Leu Val Thr Ser Ala Lys
110 115 120

Ala Leu Asn Asp Thr Gln Lys Leu Ala Cys Leu Ile Gly Val Glu
125 130 135

Gly Gly His Ser Leu Asp Asn Ser Leu Ser Ile Leu Arg Thr Phe
140 145 150

Tyr Met Leu Gly Val Arg Tyr Leu Thr Leu Thr His Thr Cys Asn
155 160 165

Thr Pro Trp Ala Glu Ser Ser Ala Lys Gly Val His Ser Phe Tyr
170 175 180

Asn	Asn	Ile	Ser	Gly	Leu	Thr	Asp	Phe	Gly	Glu	Lys	Val	Val	Ala
185												190		195
Glu	Met	Asn	Arg	Leu	Gly	Met	Met	Val	Asp	Leu	Ser	His	Val	Ser
200												205		210
Asp	Ala	Val	Ala	Arg	Arg	Ala	Leu	Glu	Val	Ser	Gln	Ala	Pro	Val
215												220		225
Ile	Phe	Ser	His	Ser	Ala	Ala	Arg	Gly	Val	Cys	Asn	Ser	Ala	Arg
230												235		240
Asn	Val	Pro	Asp	Asp	Ile	Leu	Gln	Leu	Leu	Lys	Lys	Asn	Gly	Gly
245												250		255
Val	Val	Met	Val	Ser	Leu	Ser	Met	Gly	Val	Ile	Gln	Cys	Asn	Pro
260												265		270
Ser	Ala	Asn	Val	Ser	Thr	Val	Ala	Asp	His	Phe	Asp	His	Ile	Lys
275												280		285
Ala	Val	Ile	Gly	Ser	Lys	Phe	Ile	Gly	Ile	Gly	Gly	Asp	Tyr	Asp
290												295		300
Gly	Ala	Gly	Lys	Phe	Pro	Gln	Gly	Leu	Glu	Asp	Val	Ser	Thr	Tyr
305												310		315
Pro	Val	Leu	Ile	Glu	Glu	Leu	Leu	Ser	Arg	Gly	Trp	Ser	Glu	Glu
320												325		330
Glu	Leu	Gln	Gly	Val	Leu	Arg	Gly	Asn	Leu	Leu	Arg	Val	Phe	Arg
335												340		345
Gln	Val	Glu	Lys	Val	Gln	Glu	Glu	Asn	Lys	Trp	Gln	Ser	Pro	Leu
350												355		360
Glu	Asp	Lys	Phe	Pro	Asp	Glu	Gln	Leu	Ser	Ser	Ser	Cys	His	Ser
365												370		375
Asp	Leu	Ser	Arg	Leu	Arg	Gln	Arg	Gln	Ser	Leu	Thr	Ser	Gly	Gln
380												385		390
Glu	Leu	Thr	Glu	Ile	Pro	Ile	His	Trp	Thr	Ala	Lys	Leu	Pro	Ala
395												400		405
Lys	Trp	Ser	Val	Ser	Glu	Ser	Ser	Pro	His	Met	Ala	Pro	Val	Leu
410												415		420
Ala	Val	Val	Ala	Thr	Phe	Pro	Val	Leu	Ile	Leu	Trp	Leu		
425												430		

<210> 25

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 25
agttctggtc agcctatgtg cc 22

<210> 26
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 26
cgtgatggtg tctttgtcca tggg 24

<210> 27
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 27
ctccaccaat cccgatgaac ttgg 24

<210> 28
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 28
gagcagattg acctcatacg ccgcattgtgt gcctcctatt ctgagctgga 50

<210> 29
<211> 1416
<212> DNA
<213> Homo Sapien

<400> 29
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gatccgcggc cgcgaattct aaaccaacat gccgggcacc tacgctccct 100
cgaccacact cagtagtccc agcacccagg gcctgcaaga gcaggcacgg 150
gccctgatgc gggacttccc gctcgtggac ggccacaacg acctgcccct 200
ggtcctaagg caggttacc agaaaggct acaggatgtt aacctgcgca 250
atttcagcta cggccagacc agcctggaca ggcttagaga tggcctcg 300
ggcgcccagt tctggtcagc ctatgtgcca tgccagaccc aggaccggga 350
tgccctgcgc ctcaccctgg agcagattga cctcatacgc cgcatgtgtg 400

cctcctattc tgagctggag cttgtgacct cggtctaaagc tctgaacgac 450
actcagaaat tggcctgcct catcggtgta gagggtggcc actcgctgga 500
caatagcctc tccatcttac gtaccttcta catgctggta gtgcgctacc 550
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gccccttggta ggacaagttc ccggatgagc agctgagcag ttccctgccac 1200
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cagtctcaga gtcctccccc caccctgaca aaactcacac atgcccacccg 1350
tgcccagcac ctgaactcct ggggggacccg tcagtcttcc tcttcccccc 1400
aaaacccaag gacacc 1416

<210> 30
<211> 446
<212> PRT
<213> Homo Sapien

<400> 30
Met Pro Gly Thr Tyr Ala Pro Ser Thr Thr Leu Ser Ser Pro Ser
1 5 10 15
Thr Gln Gly Leu Gln Glu Gln Ala Arg Ala Leu Met Arg Asp Phe
20 25 30
Pro Leu Val Asp Gly His Asn Asp Leu Pro Leu Val Leu Arg Gln
35 40 45
Val Tyr Gln Lys Gly Leu Gln Asp Val Asn Leu Arg Asn Phe Ser

50	55	60												
Tyr	Gly	Gln	Thr	Ser	Leu	Asp	Arg	Leu	Arg	Asp	Gly	Leu	Val	Gly
65								70						75
Ala	Gln	Phe	Trp	Ser	Ala	Tyr	Val	Pro	Cys	Gln	Thr	Gln	Asp	Arg
80								85						90
Asp	Ala	Leu	Arg	Leu	Thr	Leu	Glu	Gln	Ile	Asp	Leu	Ile	Arg	Arg
95								100						105
Met	Cys	Ala	Ser	Tyr	Ser	Glu	Leu	Glu	Leu	Val	Thr	Ser	Ala	Lys
110								115						120
Ala	Leu	Asn	Asp	Thr	Gln	Lys	Leu	Ala	Cys	Leu	Ile	Gly	Val	Glu
125								130						135
Gly	Gly	His	Ser	Leu	Asp	Asn	Ser	Leu	Ser	Ile	Leu	Arg	Thr	Phe
140								145						150
Tyr	Met	Leu	Gly	Val	Arg	Tyr	Leu	Thr	Leu	Thr	His	Thr	Cys	Asn
155								160						165
Thr	Pro	Trp	Ala	Glu	Ser	Ser	Ala	Lys	Gly	Val	His	Ser	Phe	Tyr
170								175						180
Asn	Asn	Ile	Ser	Gly	Leu	Thr	Asp	Phe	Gly	Glu	Lys	Val	Val	Ala
185								190						195
Glu	Met	Asn	Arg	Leu	Gly	Met	Met	Val	Asp	Leu	Ser	His	Val	Ser
200								205						210
Asp	Ala	Val	Ala	Arg	Arg	Ala	Leu	Glu	Val	Ser	Gln	Ala	Pro	Val
215								220						225
Ile	Phe	Ser	His	Ser	Ala	Ala	Arg	Gly	Val	Cys	Asn	Ser	Ala	Arg
230								235						240
Asn	Val	Pro	Asp	Asp	Ile	Leu	Gln	Leu	Leu	Lys	Lys	Asn	Gly	Gly
245								250						255
Val	Val	Met	Val	Ser	Leu	Ser	Met	Gly	Val	Ile	Gln	Cys	Asn	Pro
260								265						270
Ser	Ala	Asn	Val	Ser	Thr	Val	Ala	Asp	His	Phe	Asp	His	Ile	Lys
275								280						285
Ala	Val	Ile	Gly	Ser	Lys	Phe	Ile	Gly	Ile	Gly	Gly	Asp	Tyr	Asp
290								295						300
Gly	Ala	Gly	Lys	Phe	Pro	Gln	Gly	Leu	Glu	Asp	Val	Ser	Thr	Tyr
305								310						315
Pro	Val	Leu	Ile	Glu	Glu	Leu	Leu	Ser	Arg	Gly	Trp	Ser	Glu	Glu
320								325						330
Glu	Leu	Gln	Gly	Val	Leu	Arg	Gly	Asn	Leu	Leu	Arg	Val	Phe	Arg
335								340						345

Gln Val Glu Lys Val Gln Glu Glu Asn Lys Trp Gln Ser Pro Leu
350 355 360
Glu Asp Lys Phe Pro Asp Glu Gln Leu Ser Ser Ser Cys His Ser
365 370 375
Asp Leu Ser Arg Leu Arg Gln Arg Gln Ser Leu Thr Ser Gly Gln
380 385 390
Glu Leu Thr Glu Ile Pro Ile His Trp Thr Ala Lys Leu Pro Ala
395 400 405
Lys Trp Ser Val Ser Glu Ser Ser Pro His Pro Asp Lys Thr His
410 415 420
Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser
425 430 435
Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
440 445

<210> 31

<211> 1790

<212> DNA

<213> Homo Sapien

<400> 31

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cccgccagcg ccggcccat gccgcgcgc cgcggggcc ccgcgcgc 150
atccgcgcgg cggccgcgc cgttgctgcc cctgctgctg ctgctctgcg 200
tcctcggggc gccgcgagcc ggatcaggag cccacacagc tgtgatcagt 250
ccccaggatc ccacgcttct catcggtcc tccctgctgg ccacctgctc 300
agtgcacgga gaccacccag gagccaccgc cgagggcctc tactggaccc 350
tcaacggcgcc cgcctgccc cctgagctct cccgtgtact caacgcctcc 400
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ggacaacctc gtgtgccacg cccgtgacgg cagcatcctg gctggctct 500
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gtgagtggag ccacccaca gccgcctcca ctccccgcag tgagcgcccg 1150
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aaaaaaaaaa aaaaaaaaaa aaaaacaaaa aaaaaaaaaa 1790

<210> 32
<211> 422
<212> PRT
<213> Homo Sapien

<400> 32
Met Pro Ala Gly Arg Arg Gly Pro Ala Ala Gln Ser Ala Arg Arg
1 5 10 15
Pro Pro Pro Leu Leu Pro Leu Leu Leu Leu Cys Val Leu Gly
20 25 30
Ala Pro Arg Ala Gly Ser Gly Ala His Thr Ala Val Ile Ser Pro
35 40 45
Gln Asp Pro Thr Leu Leu Ile Gly Ser Ser Leu Leu Ala Thr Cys
50 55 60

Ser Val His Gly Asp Pro Pro Gly Ala Thr Ala Glu Gly Leu Tyr
65 70 75

Trp Thr Leu Asn Gly Arg Arg Leu Pro Pro Glu Leu Ser Arg Val
80 85 90

Leu Asn Ala Ser Thr Leu Ala Leu Ala Leu Ala Asn Leu Asn Gly
95 100 105

Ser Arg Gln Arg Ser Gly Asp Asn Leu Val Cys His Ala Arg Asp
110 115 120

Gly Ser Ile Leu Ala Gly Ser Cys Leu Tyr Val Gly Leu Pro Pro
125 130 135

Glu Lys Pro Val Asn Ile Ser Cys Trp Ser Lys Asn Met Lys Asp
140 145 150

Leu Thr Cys Arg Trp Thr Pro Gly Ala His Gly Glu Thr Phe Leu
155 160 165

His Thr Asn Tyr Ser Leu Lys Tyr Lys Leu Arg Trp Tyr Gly Gln
170 175 180

Asp Asn Thr Cys Glu Glu Tyr His Thr Val Gly Pro His Ser Cys
185 190 195

His Ile Pro Lys Asp Leu Ala Leu Phe Thr Pro Tyr Glu Ile Trp
200 205 210

Val Glu Ala Thr Asn Arg Leu Gly Ser Ala Arg Ser Asp Val Leu
215 220 225

Thr Leu Asp Ile Leu Asp Val Val Thr Thr Asp Pro Pro Pro Asp
230 235 240

Val His Val Ser Arg Val Gly Gly Leu Glu Asp Gln Leu Ser Val
245 250 255

Arg Trp Val Ser Pro Pro Ala Leu Lys Asp Phe Leu Phe Gln Ala
260 265 270

Lys Tyr Gln Ile Arg Tyr Arg Val Glu Asp Ser Val Asp Trp Lys
275 280 285

Val Val Asp Asp Val Ser Asn Gln Thr Ser Cys Arg Leu Ala Gly
290 295 300

Leu Lys Pro Gly Thr Val Tyr Phe Val Gln Val Arg Cys Asn Pro
305 310 315

Phe Gly Ile Tyr Gly Ser Lys Lys Ala Gly Ile Trp Ser Glu Trp
320 325 330

Ser His Pro Thr Ala Ala Ser Thr Pro Arg Ser Glu Arg Pro Gly
335 340 345

Pro Gly Gly Ala Cys Glu Pro Arg Gly Gly Glu Pro Ser Ser

350 355 360
Gly Pro Val Arg Arg Glu Leu Lys Gln Phe Leu Gly Trp Leu Lys
365 370 375
Lys His Ala Tyr Cys Ser Asn Leu Ser Phe Arg Leu Tyr Asp Gln
380 385 390
Trp Arg Ala Trp Met Gln Lys Ser His Lys Thr Arg Asn Gln Asp
395 400 405
Glu Gly Ile Leu Pro Ser Gly Arg Arg Gly Thr Ala Arg Gly Pro
410 415 420
Ala Arg

<210> 33
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 33
cccgccccac gtgcacgtga gcc 23

<210> 34
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 34
tgagccagcc caggaactgc ttg 23

<210> 35
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 35
caagtgcgtc gcaaccctt tggcatctat ggctccaaga aagccggat 50

<210> 36
<211> 1771
<212> DNA
<213> Homo Sapien

<400> 36
cccacgcgtc cgctggtgtt agatcgagca accctctaaa agcagtttag 50

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1657
1656
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1654
1653
1652
1651
1650

agtggtaaaa aaaaaaaaaa acacaccaaa cgctcgacgc cacaagg 100
atgaaatttc ttctggacat cctcctgctt ctcccggtac tgatcgctg 150
ctccctagag tccttcgtga agcttttat tcctaagagg agaaaatcag 200
tcaccggcga aatcgtgctg attacaggag ctgggcattgg aattgggaga 250
ctgactgcct atgaatttgc taaacttaaa agcaagctgg ttctctggga 300
tataaataag catggactgg aggaaacacgc tgccaaatgc aaggactgg 350
gtgccaaggt tcataccctt gtggtagact gcagcaaccc agaagatatt 400
tacagctctg caaagaaggt gaaggcagaa attggagatg ttgtatTTT 450
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taaatggatc acacttaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1700
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aaaaaaaaaa aaaaaaaaaa a 1771

<210> 37

<211> 300

<212> PRT

<213> Homo Sapien

<400> 37

Met Lys Phe Leu Leu Asp Ile Leu Leu Leu Pro Leu Leu Ile
1 5 10 15

Val Cys Ser Leu Glu Ser Phe Val Lys Leu Phe Ile Pro Lys Arg
20 25 30

Arg Lys Ser Val Thr Gly Glu Ile Val Leu Ile Thr Gly Ala Gly
35 40 45

His Gly Ile Gly Arg Leu Thr Ala Tyr Glu Phe Ala Lys Leu Lys
50 55 60

Ser Lys Leu Val Leu Trp Asp Ile Asn Lys His Gly Leu Glu Glu
65 70 75

Thr Ala Ala Lys Cys Lys Gly Leu Gly Ala Lys Val His Thr Phe
80 85 90

Val Val Asp Cys Ser Asn Arg Glu Asp Ile Tyr Ser Ser Ala Lys
95 100 105

Lys Val Lys Ala Glu Ile Gly Asp Val Ser Ile Leu Val Asn Asn
110 115 120

Ala Gly Val Val Tyr Thr Ser Asp Leu Phe Ala Thr Gln Asp Pro
125 130 135

Gln Ile Glu Lys Thr Phe Glu Val Asn Val Leu Ala His Phe Trp
140 145 150

Thr Thr Lys Ala Phe Leu Pro Ala Met Thr Lys Asn Asn His Gly
155 160 165

His Ile Val Thr Val Ala Ser Ala Ala Gly His Val Ser Val Pro
170 175 180

Phe Leu Leu Ala Tyr Cys Ser Ser Lys Phe Ala Ala Val Gly Phe
185 190 195

His Lys Thr Leu Thr Asp Glu Leu Ala Ala Leu Gln Ile Thr Gly

200 205 210

Val Lys Thr Thr Cys Leu Cys Pro Asn Phe Val Asn Thr Gly Phe
215 220 225

Ile Lys Asn Pro Ser Thr Ser Leu Gly Pro Thr Leu Glu Pro Glu
230 235 240

Glu Val Val Asn Arg Leu Met His Gly Ile Leu Thr Glu Gln Lys
245 250 255

Met Ile Phe Ile Pro Ser Ser Ile Ala Phe Leu Thr Thr Leu Glu
260 265 270

Arg Ile Leu Pro Glu Arg Phe Leu Ala Val Leu Lys Arg Lys Ile
275 280 285

Ser Val Lys Phe Asp Ala Val Ile Gly Tyr Lys Met Lys Ala Gln
290 295 300

<210> 38

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 38

ggtaaggca gaaattggag atg 23

<210> 39

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 39

atccatgca tcagcctgtt tacc 24

<210> 40

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 40

gctggtag tctatacatc agattgttt gctacacaag atcctcag 48

<210> 41

<211> 1377

<212> DNA

<213> Homo Sapien

<400> 41

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gcgcgggggc tggagcacca ccaactggag ggtccggagt agcgagcgcc 150
ccgaaggagg ccatcgggga gccgggaggg gggactgcga gaggaccccg 200
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ggccggccc ttttctcaga gatcactcaa taaacctaag aaccctata 1350
aaaaaaaaaa aaaaaaaaaa aaaaaaaa 1377

<210> 42

<211> 243
<212> PRT
<213> Homo Sapien

<400> 42

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Ser	Pro	Pro	Leu	Asp	Asp	Asn	Lys	Ile	Pro	Ser	Leu	Cys	Pro	Gly
	20						25					30		
His	Pro	Gly	Leu	Pro	Gly	Thr	Pro	Gly	His	His	Gly	Ser	Gln	Gly
	35						40					45		
Leu	Pro	Gly	Arg	Asp	Gly	Arg	Asp	Gly	Arg	Asp	Gly	Ala	Pro	Gly
	50						55					60		
Ala	Pro	Gly	Glu	Lys	Gly	Glu	Gly	Gly	Arg	Pro	Gly	Leu	Pro	Gly
	65						70					75		
Pro	Arg	Gly	Asp	Pro	Gly	Pro	Arg	Gly	Glu	Ala	Gly	Pro	Ala	Gly
	80						85					90		
Pro	Thr	Gly	Pro	Ala	Gly	Glu	Cys	Ser	Val	Pro	Pro	Arg	Ser	Ala
	95						100					105		
Phe	Ser	Ala	Lys	Arg	Ser	Glu	Ser	Arg	Val	Pro	Pro	Pro	Ser	Asp
	110						115					120		
Ala	Pro	Leu	Pro	Phe	Asp	Arg	Val	Leu	Val	Asn	Glu	Gln	Gly	His
	125						130					135		
Tyr	Asp	Ala	Val	Thr	Gly	Lys	Phe	Thr	Cys	Gln	Val	Pro	Gly	Val
	140						145					150		
Tyr	Tyr	Phe	Ala	Val	His	Ala	Thr	Val	Tyr	Arg	Ala	Ser	Leu	Gln
	155						160					165		
Phe	Asp	Leu	Val	Lys	Asn	Gly	Glu	Ser	Ile	Ala	Ser	Phe	Phe	Gln
	170						175					180		
Phe	Phe	Gly	Gly	Trp	Pro	Lys	Pro	Ala	Ser	Leu	Ser	Gly	Gly	Ala
	185						190					195		
Met	Val	Arg	Leu	Glu	Pro	Glu	Asp	Gln	Val	Trp	Val	Gln	Val	Gly
	200						205					210		
Val	Gly	Asp	Tyr	Ile	Gly	Ile	Tyr	Ala	Ser	Ile	Lys	Thr	Asp	Ser
	215						220					225		
Thr	Phe	Ser	Gly	Phe	Leu	Val	Tyr	Ser	Asp	Trp	His	Ser	Ser	Pro
	230						235					240		
Val	Phe	Ala												

<210> 43
<211> 24

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 43
tacaggccca gtcaggacca gggg 24

<210> 44
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 44
agccagccctc gctctcg 18

<210> 45
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 45
gtctgcgatc aggtctgg 18

<210> 46
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 46
gaaagaggca atggattcgc 20

<210> 47
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 47
gacttacact tgccagcaca gcac 24

<210> 48
<211> 45
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 48

ggagcaccac caactggagg gtccggagta gcgagcgccc cgaag 45

<210> 49

<211> 1876

<212> DNA

<213> Homo Sapien

<400> 49

ctttttgtc caccagccca gcctgactcc tggagattgt gaatagctcc 50

atccagcctg agaaacaagc cgggtggctg agccaggctg tgcacggagc 100

acctgacggg cccaacagac ccatgctgca tccagagacc tcccctggcc 150

gggggcacatct cctggctgtg ctctggccc tccttggcac cacctggca 200

gaggtgtggc caccggcact gcaggagcag gctccgatgg ccggagccct 250

gaacaggaag gagagtttct tgctcctctc cctgcacaac cgcctgcgca 300

gctgggtcca gccccctgctg gctgacatgc ggaggcttga ctggagtgtac 350

agcctggccc aactggctca agccaggcga gccctctgtg gaatccaaac 400

cccgagcctg gcatccggcc tggcgacac cctgcaagtg ggctggaaca 450

tgcagctgct gccccggggc ttggcgctct ttgttgaagt ggtcagccta 500

tggtttgcag aggggcagcg gtacagccac gcggcaggag agtgtgtcg 550

caacgcccacc tgcacccact acacgcagct cgtgtggcc acctcaagcc 600

agctgggctg tggcgccac ctgtgctctg caggccagac agcgatagaa 650

gcctttgtct gtgcctactc ccccgaggc aactggagg tcaacggaa 700

gacaatcatc ccctataaga agggtgccctg gtgttcgttc tgcacagcca 750

gtgtctcagg ctgtttcaaa gcctgggacc atgcaggggg gctctgtgag 800

gtccccagga atccttgcg catgagctgc cagaaccatg gacgtctcaa 850

catcagcacc tgccactgcc actgtcccc tggctacacg ggcagatact 900

gccaaagtgag gtgcagcctg cagtgtgtgc acggccgggtt ccgggaggag 950

gagtgtctgtg ggtctgtga catcggtac gggggagccc agtgtgccac 1000

caagggtcat tttcccttcc acacctgtga cctgaggatc gacggagact 1050

gcttcatggt gtcttcagag gcagacacct attacagagc caggatgaaa 1100

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acaccgcccag tggtccaaaa aggctgtct cttccacctg gcccagaccc 1800
tgtggggcag cggagcttcc ctgtggcatg aaccccacgg ggtattaaat 1850
tatgaatcag ctgaaaaaaaaaaaaa 1876

<210> 50

<211> 455

<212> PRT

<213> Homo Sapien

<400> 50

Met Leu His Pro Glu Thr Ser Pro Gly Arg Gly His Leu Leu Ala
1 5 10 15

Val Leu Leu Ala Leu Leu Gly Thr Thr Trp Ala Glu Val Trp Pro
20 25 30

Pro Gln Leu Gln Glu Gln Ala Pro Met Ala Gly Ala Leu Asn Arg
35 40 45

Lys Glu Ser Phe Leu Leu Ser Leu His Asn Arg Leu Arg Ser
50 55 60

Trp Val Gln Pro Pro Ala Ala Asp Met Arg Arg Leu Asp Trp Ser
65 70 75

Asp Ser Leu Ala Gln Leu Ala Gln Ala Arg Ala Ala Leu Cys Gly
80 85 90

Ile Pro Thr Pro Ser Leu Ala Ser Gly Leu Trp Arg Thr Leu Gln
95 100 105

Val Gly Trp Asn Met Gln Leu Leu Pro Ala Gly Leu Ala Ser Phe

110	115	120
Val Glu Val Val Ser Leu Trp Phe Ala Glu	Gly Gln Arg Tyr Ser	
125	130	135
His Ala Ala Gly Glu Cys Ala Arg Asn Ala	Thr Cys Thr His Tyr	
140	145	150
Thr Gln Leu Val Trp Ala Thr Ser Ser Gln	Leu Gly Cys Gly Arg	
155	160	165
His Leu Cys Ser Ala Gly Gln Thr Ala Ile	Glu Ala Phe Val Cys	
170	175	180
Ala Tyr Ser Pro Gly Gly Asn Trp Glu Val	Asn Gly Lys Thr Ile	
185	190	195
Ile Pro Tyr Lys Lys Gly Ala Trp Cys Ser	Leu Cys Thr Ala Ser	
200	205	210
Val Ser Gly Cys Phe Lys Ala Trp Asp His	Ala Gly Gly Leu Cys	
215	220	225
Glu Val Pro Arg Asn Pro Cys Arg Met Ser	Cys Gln Asn His Gly	
230	235	240
Arg Leu Asn Ile Ser Thr Cys His Cys His	Cys Pro Pro Gly Tyr	
245	250	255
Thr Gly Arg Tyr Cys Gln Val Arg Cys Ser	Leu Gln Cys Val His	
260	265	270
Gly Arg Phe Arg Glu Glu Glu Cys Ser Cys	Val Cys Asp Ile Gly	
275	280	285
Tyr Gly Gly Ala Gln Cys Ala Thr Lys Val	His Phe Pro Phe His	
290	295	300
Thr Cys Asp Leu Arg Ile Asp Gly Asp Cys	Phe Met Val Ser Ser	
305	310	315
Glu Ala Asp Thr Tyr Tyr Arg Ala Arg Met	Lys Cys Gln Arg Lys	
320	325	330
Gly Gly Val Leu Ala Gln Ile Lys Ser Gln	Lys Val Gln Asp Ile	
335	340	345
Leu Ala Phe Tyr Leu Gly Arg Leu Glu Thr	Thr Asn Glu Val Thr	
350	355	360
Asp Ser Asp Phe Glu Thr Arg Asn Phe Trp	Ile Gly Leu Thr Tyr	
365	370	375
Lys Thr Ala Lys Asp Ser Phe Arg Trp Ala	Thr Gly Glu His Gln	
380	385	390
Ala Phe Thr Ser Phe Ala Phe Gly Gln Pro	Asp Asn His Gly Leu	
395	400	405

Val Trp Leu Ser Ala Ala Met Gly Phe Gly Asn Cys Val Glu Leu
410 415 420
Gln Ala Ser Ala Ala Phe Asn Trp Asn Asp Gln Arg Cys Lys Thr
425 430 435
Arg Asn Arg Tyr Ile Cys Gln Phe Ala Gln Glu His Ile Ser Arg
440 445 450
Trp Gly Pro Gly Ser
455

<210> 51
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 51
aggaacttct ggatcgggct cacc 24

<210> 52
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 52
gggtctgggc caggtggaag agag 24

<210> 53
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 53
gccaggact cttccgctg ggccacaggg gagcaccagg cttc 45

<210> 54
<211> 2331
<212> DNA
<213> Homo Sapien

<400> 54
cgacgcgtg ggctgggcgc tgcaaagcgt gtccgcgg gtccccgagc 50
gtccgcggcc ctgcggccgc catgctcctg ctgctggggc tgtgcctggg 100
gctgtccctg tgtgtgggt cgccaggaaga ggccgcagagc tggggccact 150
cttcggagca ggatggactc agggtcccga ggcaagtcag actgttgcag 200

aggctgaaaa ccaaaccctt gatgacagaa ttctcagtga agtctaccat 250
catttcccgat tatgccttca ctacggtttc ctgcagaatg ctgaacagag 300
cttctgaaga ccaggacatt gagttccaga tgcagattcc agctgcagct 350
ttcatcacca acttcactat gcttatttgg aacaagggtt atcagggcga 400
aattacagag agagaaaaga agagtggtga taggtaaaa gagaaaagga 450
ataaaaccac agaagaaaat ggagagaagg ggactgaaat attcagagct 500
tctgcagtga ttcccagcaa ggacaaagcc gccttttcc tgagttatga 550
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gaggggcagt gggcgccggg aagatgattc tgggcctccc ccatctactg 750
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ggacccgaac cgggtggtgca gagcgtgcga ggagctggca cgccagccagg 2050
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aaaaaaagaca tgggagagat ggtgttttc ctctccacca cctggggata 2150
cgatgagaag atggccacct gcaagccagg aagacggccc tcaccagaca 2200
ccatgtctgc tggcaccttgc atcttggacc tccagcctc cagaactgtg 2250
agaaataaat gtgtttgtt taagctaaaa aaaaaaaaaa aaaaaaaaaa 2300
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a 2331

<210> 55
<211> 694
<212> PRT
<213> Homo Sapien

<400> 55
Met Leu Leu Leu Leu Gly Leu Cys Leu Gly Leu Ser Leu Cys Val
1 5 10 15
Gly Ser Gln Glu Glu Ala Gln Ser Trp Gly His Ser Ser Glu Gln
20 25 30
Asp Gly Leu Arg Val Pro Arg Gln Val Arg Leu Leu Gln Arg Leu
35 40 45
Lys Thr Lys Pro Leu Met Thr Glu Phe Ser Val Lys Ser Thr Ile
50 55 60
Ile Ser Arg Tyr Ala Phe Thr Thr Val Ser Cys Arg Met Leu Asn
65 70 75
Arg Ala Ser Glu Asp Gln Asp Ile Glu Phe Gln Met Gln Ile Pro
80 85 90
Ala Ala Ala Phe Ile Thr Asn Phe Thr Met Leu Ile Gly Asp Lys
95 100 105
Val Tyr Gln Gly Glu Ile Thr Glu Arg Glu Lys Lys Ser Gly Asp
110 115 120

Arg Val Lys Glu Lys Arg Asn Lys Thr Thr Glu Glu Asn Gly Glu
125 130 135
Lys Gly Thr Glu Ile Phe Arg Ala Ser Ala Val Ile Pro Ser Lys
140 145 150
Asp Lys Ala Ala Phe Phe Leu Ser Tyr Glu Glu Leu Leu Gln Arg
155 160 165
Arg Leu Gly Lys Tyr Glu His Ser Ile Ser Val Arg Pro Gln Gln
170 175 180
Leu Ser Gly Arg Leu Ser Val Asp Val Asn Ile Leu Glu Ser Ala
185 190 195
Gly Ile Ala Ser Leu Glu Val Leu Pro Leu His Asn Ser Arg Gln
200 205 210
Arg Gly Ser Gly Arg Gly Glu Asp Asp Ser Gly Pro Pro Pro Ser
215 220 225
Thr Val Ile Asn Gln Asn Glu Thr Phe Ala Asn Ile Ile Phe Lys
230 235 240
Pro Thr Val Val Gln Gln Ala Arg Ile Ala Gln Asn Gly Ile Leu
245 250 255
Gly Asp Phe Ile Ile Arg Tyr Asp Val Asn Arg Glu Gln Ser Ile
260 265 270
Gly Asp Ile Gln Val Leu Asn Gly Tyr Phe Val His Tyr Phe Ala
275 280 285
Pro Lys Asp Leu Pro Pro Leu Pro Lys Asn Val Val Phe Val Leu
290 295 300
Asp Ser Ser Ala Ser Met Val Gly Thr Lys Leu Arg Gln Thr Lys
305 310 315
Asp Ala Leu Phe Thr Ile Leu His Asp Leu Arg Pro Gln Asp Arg
320 325 330
Phe Ser Ile Ile Gly Phe Ser Asn Arg Ile Lys Val Trp Lys Asp
335 340 345
His Leu Ile Ser Val Thr Pro Asp Ser Ile Arg Asp Gly Lys Val
350 355 360
Tyr Ile His His Met Ser Pro Thr Gly Gly Thr Asp Ile Asn Gly
365 370 375
Ala Leu Gln Arg Ala Ile Arg Leu Leu Asn Lys Tyr Val Ala His
380 385 390
Ser Gly Ile Gly Asp Arg Ser Val Ser Leu Ile Val Phe Leu Thr
395 400 405
Asp Gly Lys Pro Thr Val Gly Glu Thr His Thr Leu Lys Ile Leu

410	415	420
Asn Asn Thr Arg Glu Ala Ala Arg Gly Gln Val Cys Ile Phe Thr		
425	430	435
Ile Gly Ile Gly Asn Asp Val Asp Phe Arg Leu Leu Glu Lys Leu		
440	445	450
Ser Leu Glu Asn Cys Gly Leu Thr Arg Arg Val His Glu Glu Glu		
455	460	465
Asp Ala Gly Ser Gln Leu Ile Gly Phe Tyr Asp Glu Ile Arg Thr		
470	475	480
Pro Leu Leu Ser Asp Ile Arg Ile Asp Tyr Pro Pro Ser Ser Val		
485	490	495
Val Gln Ala Thr Lys Thr Leu Phe Pro Asn Tyr Phe Asn Gly Ser		
500	505	510
Glu Ile Ile Ile Ala Gly Lys Leu Val Asp Arg Lys Leu Asp His		
515	520	525
Leu His Val Glu Val Thr Ala Ser Asn Ser Lys Lys Phe Ile Ile		
530	535	540
Leu Lys Thr Asp Val Pro Val Arg Pro Gln Lys Ala Gly Lys Asp		
545	550	555
Val Thr Gly Ser Pro Arg Pro Gly Gly Asp Gly Glu Gly Asp Thr		
560	565	570
Asn His Ile Glu Arg Leu Trp Ser Tyr Leu Thr Thr Lys Glu Leu		
575	580	585
Leu Ser Ser Trp Leu Gln Ser Asp Asp Glu Pro Glu Lys Glu Arg		
590	595	600
Leu Arg Gln Arg Ala Gln Ala Leu Ala Val Ser Tyr Arg Phe Leu		
605	610	615
Thr Pro Phe Thr Ser Met Lys Leu Arg Gly Pro Val Pro Arg Met		
620	625	630
Asp Gly Leu Glu Glu Ala His Gly Met Ser Ala Ala Met Gly Pro		
635	640	645
Glu Pro Val Val Gln Ser Val Arg Gly Ala Gly Thr Gln Pro Gly		
650	655	660
Pro Leu Leu Lys Lys Pro Asn Ser Val Lys Lys Lys Gln Asn Lys		
665	670	675
Thr Lys Lys Arg His Gly Arg Asp Gly Val Phe Pro Leu His His		
680	685	690
Leu Gly Ile Arg		

<210> 56
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 56
gtgggaacca aactccggca gacc 24

<210> 57
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 57
cacatcgagc gtctctgg 18

<210> 58
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 58
agccgctcct tctccggttc atcg 24

<210> 59
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 59
tggaaggacc acttgatatc agtcactcca gacagcatca gggatggg 48

<210> 60
<211> 1413
<212> DNA
<213> Homo Sapien

<400> 60
cggacgcgtg gggtgcccgca catggcgagt gtagtgctgc cgagcggatc 50
ccagtgtgcg gcggcagcgg cggcgccggc gcctcccgaa ctccggcttc 100
tgctgttgct cttctccggcc gcggcactga tccccacagg tgatggcag 150
aatctgttta cgaaagacgt gacagtgtatc gagggagagg ttgcgaccat 200

cagttgccaa gtcaataaga gtgacgactc tgtgatttag ctactgaatc 250
ccaacaggca gaccatttat ttcagggact tcaggcctt gaaggacagc 300
aggtttcaatc tgctgaattt ttcttagcagt gaactcaaag tatcattgac 350
aaacgtctca atttctgatg aaggaagata cttttgccag ctctataccg 400
atcccccaca ggaaagttac accaccatca cagtccttgtt cccaccacgt 450
aatctgatga tcgatatacca gaaagacact gcgggtggaaag gtgaggagat 500
tgaagtcaac tgcactgcta tggccagcaa gccagccacg actatcaggt 550
ggttcaaagg gaacacagag ctaaaaggca aatcgaggt ggaagagtgg 600
tcagacatgt acactgtgac cagtcagctg atgctgaagg tgcacaagga 650
ggacgatggg gtcccagtga tctgccaggt ggagcacccct gcggtcactg 700
gaaacctgca gacccagcgg tatctagaag tacagtataa gcctcaagtg 750
cacattcaga tgacttatcc tctacaaggc ttaacccggg aaggggacgc 800
gctttagtta acatgtgaag ccatcggaa gccccagcct gtgatggtaa 850
cttgggtgag agtcgatgtat gaaatgcctc aacacgcccgt actgtctggg 900
cccaacctgt tcatcaataa cctaaacaaa acagataatg gtacataaccg 950
ctgtgaagct tcaaacatag tggggaaagc tcactcgat tatatgctgt 1000
atgtatacga tccccccaca actatccctc ctcccacaac aaccaccacc 1050
accaccacca ccaccaccac caccatcctt accatcatca cagattcccg 1100
agcaggtgaa gaaggctcga tcagggcagt ggatcatgcc gtgatcggtg 1150
gcgtcgtggc ggtgggtggtg ttgcctatgc tgtgcttgct catcattctg 1200
ggcgctatt ttgcagaca taaaggtaca tacttcactc atgaagccaa 1250
aggagccat gacgcagcag acgcagacac agctataatc aatgcagaag 1300
gaggacagaa caactccgaa gaaaagaaaag agtacttcat ctagatcagc 1350
cttttgttt caatgaggtg tccaaactggc cctatTTAGA tgataaagag 1400
acagtgtat tgg 1413

<210> 61
<211> 440
<212> PRT
<213> Homo Sapien

<400> 61
Met Ala Ser Val Val Leu Pro Ser Gly Ser Gln Cys Ala Ala Ala
1 5 10 15

Ala	Ala	Ala	Ala	Ala	Pro	Pro	Gly	Leu	Arg	Leu	Leu	Leu	Leu	
					20			25					30	
Phe	Ser	Ala	Ala	Ala	Leu	Ile	Pro	Thr	Gly	Asp	Gly	Gln	Asn	Leu
					35			40					45	
Phe	Thr	Lys	Asp	Val	Thr	Val	Ile	Glu	Gly	Glu	Val	Ala	Thr	Ile
					50			55					60	
Ser	Cys	Gln	Val	Asn	Lys	Ser	Asp	Asp	Ser	Val	Ile	Gln	Leu	Leu
					65			70					75	
Asn	Pro	Asn	Arg	Gln	Thr	Ile	Tyr	Phe	Arg	Asp	Phe	Arg	Pro	Leu
					80			85					90	
Lys	Asp	Ser	Arg	Phe	Gln	Leu	Leu	Asn	Phe	Ser	Ser	Ser	Glu	Leu
					95			100					105	
Lys	Val	Ser	Leu	Thr	Asn	Val	Ser	Ile	Ser	Asp	Glu	Gly	Arg	Tyr
					110			115					120	
Phe	Cys	Gln	Leu	Tyr	Thr	Asp	Pro	Pro	Gln	Glu	Ser	Tyr	Thr	Thr
					125			130					135	
Ile	Thr	Val	Leu	Val	Pro	Pro	Arg	Asn	Leu	Met	Ile	Asp	Ile	Gln
					140			145					150	
Lys	Asp	Thr	Ala	Val	Glu	Gly	Glu	Glu	Ile	Glu	Val	Asn	Cys	Thr
					155			160					165	
Ala	Met	Ala	Ser	Lys	Pro	Ala	Thr	Thr	Ile	Arg	Trp	Phe	Lys	Gly
					170			175					180	
Asn	Thr	Glu	Leu	Lys	Gly	Lys	Ser	Glu	Val	Glu	Glu	Trp	Ser	Asp
					185			190					195	
Met	Tyr	Thr	Val	Thr	Ser	Gln	Leu	Met	Leu	Lys	Val	His	Lys	Glu
					200			205					210	
Asp	Asp	Gly	Val	Pro	Val	Ile	Cys	Gln	Val	Glu	His	Pro	Ala	Val
					215			220					225	
Thr	Gly	Asn	Leu	Gln	Thr	Gln	Arg	Tyr	Leu	Glu	Val	Gln	Tyr	Lys
					230			235					240	
Pro	Gln	Val	His	Ile	Gln	Met	Thr	Tyr	Pro	Leu	Gln	Gly	Leu	Thr
					245			250					255	
Arg	Glu	Gly	Asp	Ala	Leu	Glu	Leu	Thr	Cys	Glu	Ala	Ile	Gly	Lys
					260			265					270	
Pro	Gln	Pro	Val	Met	Val	Thr	Trp	Val	Arg	Val	Asp	Asp	Glu	Met
					275			280					285	
Pro	Gln	His	Ala	Val	Leu	Ser	Gly	Pro	Asn	Leu	Phe	Ile	Asn	Asn
					290			295					300	
Leu	Asn	Lys	Thr	Asp	Asn	Gly	Thr	Tyr	Arg	Cys	Glu	Ala	Ser	Asn

305 310 315

Ile Val Gly Lys Ala His Ser Asp Tyr Met Leu Tyr Val Tyr Asp
320 325 330

Pro Pro Thr Thr Ile Pro Pro Pro Thr Thr Thr Thr Thr Thr
335 340 345

Thr Thr Thr Thr Thr Ile Leu Thr Ile Ile Thr Asp Ser Arg
350 355 360

Ala Gly Glu Glu Gly Ser Ile Arg Ala Val Asp His Ala Val Ile
365 370 375

Gly Gly Val Val Ala Val Val Val Phe Ala Met Leu Cys Leu Leu
380 385 390

Ile Ile Leu Gly Arg Tyr Phe Ala Arg His Lys Gly Thr Tyr Phe
395 400 405

Thr His Glu Ala Lys Gly Ala Asp Asp Ala Ala Asp Ala Asp Thr
410 415 420

Ala Ile Ile Asn Ala Glu Gly Gly Gln Asn Asn Ser Glu Glu Lys
425 430 435

Lys Glu Tyr Phe Ile
440

<210> 62
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 62
ggcttctgct gttgctcttc tccg 24

<210> 63
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 63
gtacactgtg accagtcagc 20

<210> 64
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 64
atcatcacag attcccgagc 20

<210> 65
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 65
ttcaatctcc tcaccttcca ccgc 24

<210> 66
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 66
atagctgtgt ctgcgtctgc tgcg 24

<210> 67
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 67
cgcgccactg atccccacag gtatgggca gaatctgttt acgaaagacg 50

<210> 68
<211> 2555
<212> DNA
<213> Homo Sapien

<400> 68
ggggcggttg gacgcggact cgaacgcagt tgttcgga cccaggaccc 50
cctcgccccc gacccgccag gaaagactga ggccgcggcc tgcccccggcc 100
ggctccctgc gccgcccggc cctcccgga cagaagatgt gctccagggt 150
ccctctgtgc ctgcgcgtgc tcctgtact ggccctgggg cctgggtgc 200
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gccagcctgc gcctgccccg cctgctgctg ctggacctca gccacaacag 450
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cgcttgcgca acctccacga cctggatgtg tccgacaacc agctggagcg 600
agtgccacct gtgatccgag gcctccgggg cctgacgcgc ctgcggctgg 650
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gcgggtctga gtgtgaggtg ccactcatgg gcttcccagg gcctggcctc 1900
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gaaagagcag agggagagcg gtaggcggc tgcgtgactc tagtcttggc 2350
cccaggaagc gaaggaacaa aagaaactgg aaaggaagat gctttagaa 2400
catgtttgc tttttaaaa tatatatata ttataagag atcctttccc 2450
atttattctg ggaagatgtt tttcaaactc agagacaagg actttggttt 2500
ttgtaagaca aacgatgata tgaaggcctt ttgtaagaaa aaataaaaaaa 2550
aaaaaa 2555

<210> 69

<211> 598

<212> PRT

<213> Homo Sapien

<400> 69

Met	Cys	Ser	Arg	Val	Pro	Leu	Leu	Leu	Pro	Leu	Leu	Leu	Leu	Leu	Leu
1				5					10						15

Ala	Leu	Gly	Pro	Gly	Val	Gln	Gly	Cys	Pro	Ser	Gly	Cys	Gln	Cys
					20				25					30

Ser	Gln	Pro	Gln	Thr	Val	Phe	Cys	Thr	Ala	Arg	Gln	Gly	Thr	Thr
				35				40						45

Val	Pro	Arg	Asp	Val	Pro	Pro	Asp	Thr	Val	Gly	Leu	Tyr	Val	Phe
				50				55						60

Glu	Asn	Gly	Ile	Thr	Met	Leu	Asp	Ala	Ser	Ser	Phe	Ala	Gly	Leu
				65					70					75

Pro	Gly	Leu	Gln	Leu	Leu	Asp	Leu	Ser	Gln	Asn	Gln	Ile	Ala	Ser
				80				85						90

Leu	Arg	Leu	Pro	Arg	Leu	Leu	Leu	Asp	Leu	Ser	His	Asn	Ser	
				95				100						105

Leu Leu Ala Leu Glu Pro Gly Ile Leu Asp Thr Ala Asn Val Glu

110	115	120
Ala Leu Arg Leu Ala Gly Leu Gly Leu Gln Gln Leu Asp Glu Gly		
125	130	135
Leu Phe Ser Arg Leu Arg Asn Leu His Asp Leu Asp Val Ser Asp		
140	145	150
Asn Gln Leu Glu Arg Val Pro Pro Val Ile Arg Gly Leu Arg Gly		
155	160	165
Leu Thr Arg Leu Arg Leu Ala Gly Asn Thr Arg Ile Ala Gln Leu		
170	175	180
Arg Pro Glu Asp Leu Ala Gly Leu Ala Ala Leu Gln Glu Leu Asp		
185	190	195
Val Ser Asn Leu Ser Leu Gln Ala Leu Pro Gly Asp Leu Ser Gly		
200	205	210
Leu Phe Pro Arg Leu Arg Leu Ala Ala Ala Arg Asn Pro Phe		
215	220	225
Asn Cys Val Cys Pro Leu Ser Trp Phe Gly Pro Trp Val Arg Glu		
230	235	240
Ser His Val Thr Leu Ala Ser Pro Glu Glu Thr Arg Cys His Phe		
245	250	255
Pro Pro Lys Asn Ala Gly Arg Leu Leu Leu Glu Leu Asp Tyr Ala		
260	265	270
Asp Phe Gly Cys Pro Ala Thr Thr Thr Ala Thr Val Pro Thr		
275	280	285
Thr Arg Pro Val Val Arg Glu Pro Thr Ala Leu Ser Ser Ser Leu		
290	295	300
Ala Pro Thr Trp Leu Ser Pro Thr Ala Pro Ala Thr Glu Ala Pro		
305	310	315
Ser Pro Pro Ser Thr Ala Pro Pro Thr Val Gly Pro Val Pro Gln		
320	325	330
Pro Gln Asp Cys Pro Pro Ser Thr Cys Leu Asn Gly Gly Thr Cys		
335	340	345
His Leu Gly Thr Arg His His Leu Ala Cys Leu Cys Pro Glu Gly		
350	355	360
Phe Thr Gly Leu Tyr Cys Glu Ser Gln Met Gly Gln Gly Thr Arg		
365	370	375
Pro Ser Pro Thr Pro Val Thr Pro Arg Pro Pro Arg Ser Leu Thr		
380	385	390
Leu Gly Ile Glu Pro Val Ser Pro Thr Ser Leu Arg Val Gly Leu		
395	400	405

Gln Arg Tyr Leu Gln Gly Ser Ser Val Gln Leu Arg Ser Leu Arg
410 415 420
Leu Thr Tyr Arg Asn Leu Ser Gly Pro Asp Lys Arg Leu Val Thr
425 430 435
Leu Arg Leu Pro Ala Ser Leu Ala Glu Tyr Thr Val Thr Gln Leu
440 445 450
Arg Pro Asn Ala Thr Tyr Ser Val Cys Val Met Pro Leu Gly Pro
455 460 465
Gly Arg Val Pro Glu Gly Glu Ala Cys Gly Glu Ala His Thr
470 475 480
Pro Pro Ala Val His Ser Asn His Ala Pro Val Thr Gln Ala Arg
485 490 495
Glu Gly Asn Leu Pro Leu Leu Ile Ala Pro Ala Leu Ala Ala Val
500 505 510
Leu Leu Ala Ala Leu Ala Ala Val Gly Ala Ala Tyr Cys Val Arg
515 520 525
Arg Gly Arg Ala Met Ala Ala Ala Ala Gln Asp Lys Gly Gln Val
530 535 540
Gly Pro Gly Ala Gly Pro Leu Glu Leu Glu Gly Val Lys Val Pro
545 550 555
Leu Glu Pro Gly Pro Lys Ala Thr Glu Gly Gly Glu Ala Leu
560 565 570
Pro Ser Gly Ser Glu Cys Glu Val Pro Leu Met Gly Phe Pro Gly
575 580 585
Pro Gly Leu Gln Ser Pro Leu His Ala Lys Pro Tyr Ile
590 595

<210> 70

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 70

ccctccactg ccccacggac tg 22

<210> 71

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 71
cggttctggg gacgttaggg ctgc 24

<210> 72
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 72
ctgccccaccg tccacacctgcc tcaat 25

<210> 73
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 73
aggactgccc accgtccacc tgcctcaatg ggggcacatg ccacc 45

<210> 74
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 74
acgcaaagcc ctacatctaa gccagagaga gacagggcag ctggg 45

<210> 75
<211> 1077
<212> DNA
<213> Homo Sapien

<400> 75
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cgccccgcca cctccttgct accccactct taaaaccaca gctgtggca 100
gggtccccag ctcatgccag cctcatctcc tttcttgcta gcccccaaag 150
ggcctccagg caacatgggg ggcccagtca gagagccggc actctcagtt 200
gccctctgggt tgagttgggg ggcagctctg ggggcccgtgg cttgtgccat 250
ggctctgctg acccaacaaa cagagctgca gagcctcagg agagaggtga 300
gccggctgca ggggacagga ggcccctccc agaatgggaa agggtatccc 350
tggcagagtc tcccgagca gagttccgat gccctggaag cctggagaa 400

tggggagaga tcccgaaaaa ggagagcagt gctcaccaa aaacagaaga 450
agcagcactc tgtcctgcac ctggttccca ttaacgccac ctccaaggat 500
gactccgatg tgacagaggt gatgtggcaa ccagcttta ggcgtggag 550
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atctgctgta tagccaggtc ctgtttcaag acgtgacttt caccatgggt 650
caggtggtgt ctcgagaagg ccaaggaagg caggagactc tattccgatg 700
tataagaagt atgcctccc acccggaccg ggcctacaac agctgctata 750
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gtttgtgaaa ctgtgattgt gttataaaaa gtggctccca gcttggaaaga 900
ccagggtggg tacatactgg agacagccaa gagctgagta tataaaggag 950
aggaaatgtg caggaacaga ggcatttcc tgggtttggc tccccgttcc 1000
tcactttcc ctttcattt ccacccctta gactttgatt ttacggatat 1050
cttgcttctg ttccccatgg agctccg 1077

<210> 76
<211> 250
<212> PRT
<213> Homo Sapien

<400> 76

Met Pro Ala Ser Ser Pro Phe Leu Leu Ala Pro Lys Gly Pro Pro
1 5 10 15

Gly Asn Met Gly Gly Pro Val Arg Glu Pro Ala Leu Ser Val Ala
20 25 30

Leu Trp Leu Ser Trp Gly Ala Ala Leu Gly Ala Val Ala Cys Ala
35 40 45

Met Ala Leu Leu Thr Gln Gln Thr Glu Leu Gln Ser Leu Arg Arg
50 55 60

Glu Val Ser Arg Leu Gln Gly Thr Gly Gly Pro Ser Gln Asn Gly
65 70 75

Glu Gly Tyr Pro Trp Gln Ser Leu Pro Glu Gln Ser Ser Asp Ala
80 85 90

Leu Glu Ala Trp Glu Asn Gly Glu Arg Ser Arg Lys Arg Arg Ala
95 100 105

Val Leu Thr Gln Lys Gln Lys Lys Gln His Ser Val Leu His Leu
110 115 120

Val Pro Ile Asn Ala Thr Ser Lys Asp Asp Ser Asp Val Thr Glu
125 130 135

Val Met Trp Gln Pro Ala Leu Arg Arg Gly Arg Gly Leu Gln Ala
140 145 150

Gln Gly Tyr Gly Val Arg Ile Gln Asp Ala Gly Val Tyr Leu Leu
155 160 165

Tyr Ser Gln Val Leu Phe Gln Asp Val Thr Phe Thr Met Gly Gln
170 175 180

Val Val Ser Arg Glu Gly Gln Gly Arg Gln Glu Thr Leu Phe Arg
185 190 195

Cys Ile Arg Ser Met Pro Ser His Pro Asp Arg Ala Tyr Asn Ser
200 205 210

Cys Tyr Ser Ala Gly Val Phe His Leu His Gln Gly Asp Ile Leu
215 220 225

Ser Val Ile Ile Pro Arg Ala Arg Ala Lys Leu Asn Leu Ser Pro
230 235 240

His Gly Thr Phe Leu Gly Phe Val Lys Leu
245 250

<210> 77

<211> 2849

<212> DNA

<213> Homo Sapien

<400> 77

cactttctcc ctctcttcct ttactttcga gaaaccgcgc ttccgcttct 50

ggtcgcagag acctcggaga ccgcgcgggg gagacggagg tgctgtgggt 100

gggggggacc tgtggctgct cgtaccgcgc cccaccctcc tcttctgcac 150

tgccgtcctc cggaagacct tttccctgc tctgtttct tcaccgagtc 200

tgtgcatcgc cccggacctg gccgggagga ggcttgcccg gcgggagatg 250

ctctaggggc ggccgcggag gagcggccgg cggacggag ggcccgccag 300

gaagatgggc tcccgtggac agggacttt gctggcgtac tgcctgtcc 350

ttgcctttgc ctctggcctg gtcctgagtc gtgtgccccca tgtccagggg 400

gaacagcagg agtgggaggg gactgaggag ctgccgtcgc ctccggacca 450

tgccgagagg gctgaagaac aacatgaaaa atacaggccc agtcaggacc 500

aggggctccc tgcttccgg tgcttgcgt gctgtgaccc cggtaacctcc 550

atgtacccgg cgaccgcgt gccccagatc aacatcacta tcttgaaagg 600

ggagaagggt gaccgcggag atcgaggcct ccaagggaaa tatggcaaaa 650

caggctcagc aggggccagg ggccacactg gacccaaagg gcagaaggc 700
tccatggggg cccctgggg a cggtgcaag agccactacg ccgcctttc 750
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<210> 78

<211> 281

<212> PRT

<213> Homo Sapien

<400> 78

Met Gly Ser Arg Gly Gln Gly Leu Leu Leu Ala Tyr Cys Leu Leu
1 5 10 15

Leu Ala Phe Ala Ser Gly Leu Val Leu Ser Arg Val Pro His Val
20 25 30

Gln Gly Glu Gln Gln Glu Trp Glu Gly Thr Glu Glu Leu Pro Ser
35 40 45

Pro Pro Asp His Ala Glu Arg Ala Glu Glu Gln His Glu Lys Tyr
50 55 60

Arg Pro Ser Gln Asp Gln Gly Leu Pro Ala Ser Arg Cys Leu Arg
65 70 75

Cys Cys Asp Pro Gly Thr Ser Met Tyr Pro Ala Thr Ala Val Pro
80 85 90

Gln Ile Asn Ile Thr Ile Leu Lys Gly Glu Lys Gly Asp Arg Gly
95 100 105

Asp Arg Gly Leu Gln Gly Lys Tyr Gly Lys Thr Gly Ser Ala Gly

110

115

120

Ala Arg Gly His Thr Gly Pro Lys Gly Gln Lys Gly Ser Met Gly
125 130 135

Ala Pro Gly Glu Arg Cys Lys Ser His Tyr Ala Ala Phe Ser Val
140 145 150

Gly Arg Lys Lys Pro Met His Ser Asn His Tyr Tyr Gln Thr Val
155 160 165

Ile Phe Asp Thr Glu Phe Val Asn Leu Tyr Asp His Phe Asn Met
170 175 180

Phe Thr Gly Lys Phe Tyr Cys Tyr Val Pro Gly Leu Tyr Phe Phe
185 190 195

Ser Leu Asn Val His Thr Trp Asn Gln Lys Glu Thr Tyr Leu His
200 205 210

Ile Met Lys Asn Glu Glu Glu Val Val Ile Leu Phe Ala Gln Val
215 220 225

Gly Asp Arg Ser Ile Met Gln Ser Gln Ser Leu Met Leu Glu Leu
230 235 240

Arg Glu Gln Asp Gln Val Trp Val Arg Leu Tyr Lys Gly Glu Arg
245 250 255

Glu Asn Ala Ile Phe Ser Glu Glu Leu Asp Thr Tyr Ile Thr Phe
260 265 270

Ser Gly Tyr Leu Val Lys His Ala Thr Glu Pro
275 280

<210> 79

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 79

tacaggccca gtcaggacca gggg 24

<210> 80

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 80

ctgaagaagt agaggccggg cacg 24

<210> 81

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 81

cccggtgctt gcgctgctgt gaccccgta cctccatgta cccgg 45

<210> 82

<211> 2284

<212> DNA

<213> Homo Sapien

<400> 82

gcggagcatc cgctgcggtc ctcgcccaga ccccccgcgcg gattcgccgg 50

tccttcccgc gggcgcgaca gagctgtcct cgcacactgga tggcagcagg 100

ggcgccgggg tcctctcgac gccagagaga aatctcatca tctgtgcagc 150

cttcttaaag caaactaaga ccagagggag gattatcctt gacctttgaa 200

gaccaaaact aaactgaaat ttaaaatgtt cttcggggga gaagggagct 250

tgacttacac tttggtaata atttgcttcc tgacactaag gctgtctgct 300

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gttttatgtt tggttttga gaaggaatga agtggaaacc aaatttaggtt 2000
atTTGGGta atctgtctct aaaatattag ctaaaaacaa agctctatgt 2050
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tatgcaaaga aacaggttag gacatctagg ttccaattca ttcacattct 2150
tggttccaga taaaatcaac tgTTtatATC aatttctaatt ggatttgctt 2200
ttcttttat atggattcct ttAAAactta ttccagatgt agttccttcc 2250
aattaaatat ttgaataaaat ctTTGTTac tcaa 2284

<210> 83
<211> 431
<212> PRT
<213> Homo Sapien

<400> 83
Met Phe Phe Gly Gly Glu Gly Ser Leu Thr Tyr Thr Leu Val Ile
1 5 10 15

Ile Cys Phe Leu Thr Leu Arg Leu Ser Ala Ser Gln Asn Cys Leu
20 25 30
Lys Lys Ser Leu Glu Asp Val Val Ile Asp Ile Gln Ser Ser Leu
35 40 45
Ser Lys Gly Ile Arg Gly Asn Glu Pro Val Tyr Thr Ser Thr Gln
50 55 60
Glu Asp Cys Ile Asn Ser Cys Cys Ser Thr Lys Asn Ile Ser Gly
65 70 75
Asp Lys Ala Cys Asn Leu Met Ile Phe Asp Thr Arg Lys Thr Ala
80 85 90
Arg Gln Pro Asn Cys Tyr Leu Phe Phe Cys Pro Asn Glu Glu Ala
95 100 105
Cys Pro Leu Lys Pro Ala Lys Gly Leu Met Ser Tyr Arg Ile Ile
110 115 120
Thr Asp Phe Pro Ser Leu Thr Arg Asn Leu Pro Ser Gln Glu Leu
125 130 135
Pro Gln Glu Asp Ser Leu Leu His Gly Gln Phe Ser Gln Ala Val
140 145 150
Thr Pro Leu Ala His His His Thr Asp Tyr Ser Lys Pro Thr Asp
155 160 165
Ile Ser Trp Arg Asp Thr Leu Ser Gln Lys Phe Gly Ser Ser Asp
170 175 180
His Leu Glu Lys Leu Phe Lys Met Asp Glu Ala Ser Ala Gln Leu
185 190 195
Leu Ala Tyr Lys Glu Lys Gly His Ser Gln Ser Ser Gln Phe Ser
200 205 210
Ser Asp Gln Glu Ile Ala His Leu Leu Pro Glu Asn Val Ser Ala
215 220 225
Leu Pro Ala Thr Val Ala Val Ala Ser Pro His Thr Thr Ser Ala
230 235 240
Thr Pro Lys Pro Ala Thr Leu Leu Pro Thr Asn Ala Ser Val Thr
245 250 255
Pro Ser Gly Thr Ser Gln Pro Gln Leu Ala Thr Thr Ala Pro Pro
260 265 270
Val Thr Thr Val Thr Ser Gln Pro Pro Thr Thr Leu Ile Ser Thr
275 280 285
Val Phe Thr Arg Ala Ala Ala Thr Leu Gln Ala Met Ala Thr Thr
290 295 300
Ala Val Leu Thr Thr Phe Gln Ala Pro Thr Asp Ser Lys Gly

305 310 315

Ser Leu Glu Thr Ile Pro Phe Thr Glu Ile Ser Asn Leu Thr Leu
320 325 330

Asn Thr Gly Asn Val Tyr Asn Pro Thr Ala Leu Ser Met Ser Asn
335 340 345

Val Glu Ser Ser Thr Met Asn Lys Thr Ala Ser Trp Glu Gly Arg
350 355 360

Glu Ala Ser Pro Gly Ser Ser Ser Gln Gly Ser Val Pro Glu Asn
365 370 375

Gln Tyr Gly Leu Pro Phe Glu Lys Trp Leu Leu Ile Gly Ser Leu
380 385 390

Leu Phe Gly Val Leu Phe Leu Val Ile Gly Leu Val Leu Leu Gly
395 400 405

Arg Ile Leu Ser Glu Ser Leu Arg Arg Lys Arg Tyr Ser Arg Leu
410 415 420

Asp Tyr Leu Ile Asn Gly Ile Tyr Val Asp Ile
425 430

<210> 84
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 84
agggaggatt atccttgacc tttgaagacc 30

<210> 85
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 85
gaagcaagtg cccagctc 18

<210> 86
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 86
cgggtccctg ctctttgg 18

<210> 87
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 87
caccgtagct gggagcgcac tcac 24

<210> 88
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 88
agtgttaagtc aagctccc 18

<210> 89
<211> 49
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 89
gcttcctgac actaaggctg tctgctagtc agaattgcct caaaaagag 49

<210> 90
<211> 957
<212> DNA
<213> Homo Sapien

<400> 90
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gtcttcgcct ctttgtgtgc ctggattcg gggtaacctgc tcgcagagct 100
cattccagat gcacccctgt ccagtgtgc ctatagcatc cgccatcg 150
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tagtgaagat gtcaattagc aggaaactaa aatgaatgga aattcttaaa 950
aaaaaaaa 957

<210> 91

<211> 235

<212> PRT

<213> Homo Sapien

<400> 91

Met Arg Pro Leu Ala Gly Gly Leu Leu Lys Val Val Phe Val Val
1 5 10 15

Phe Ala Ser Leu Cys Ala Trp Tyr Ser Gly Tyr Leu Leu Ala Glu
20 25 30

Leu Ile Pro Asp Ala Pro Leu Ser Ser Ala Ala Tyr Ser Ile Arg
35 40 45

Ser Ile Gly Glu Arg Pro Val Leu Lys Ala Pro Val Pro Lys Arg
50 55 60

Gln Lys Cys Asp His Trp Thr Pro Cys Pro Ser Asp Thr Tyr Ala
65 70 75

Tyr Arg Leu Leu Ser Gly Gly Arg Ser Lys Tyr Ala Lys Ile
80 85 90

Cys Phe Glu Asp Asn Leu Leu Met Gly Glu Gln Leu Gly Asn Val
95 100 105

Ala Arg Gly Ile Asn Ile Ala Ile Val Asn Tyr Val Thr Gly Asn
110 115 120

Val Thr Ala Thr Arg Cys Phe Asp Met Tyr Glu Gly Asp Asn Ser
125 130 135

Gly Pro Met Thr Lys Phe Ile Gln Ser Ala Ala Pro Lys Ser Leu
140 145 150

Leu Phe Met Val Thr Tyr Asp Asp Gly Ser Thr Arg Leu Asn Asn
155 160 165

Asp Ala Lys Asn Ala Ile Glu Ala Leu Gly Ser Lys Glu Ile Arg
170 175 180

Asn Met Lys Phe Arg Ser Ser Trp Val Phe Ile Ala Ala Lys Gly
185 190 195

Leu Glu Leu Pro Ser Glu Ile Gln Arg Glu Lys Ile Asn His Ser
200 205 210

Asp Ala Lys Asn Asn Arg Tyr Ser Gly Trp Pro Ala Glu Ile Gln
215 220 225

Ile Glu Gly Cys Ile Pro Lys Glu Arg Ser
230 235

<210> 92

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 92

aatgtgacca ctggactccc 20

<210> 93

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 93

aggcttgaa ctcccttc 18

<210> 94

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 94

aagattcttg agcgattcca gctg 24

<210> 95

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 95

aatccctgct cttcatggtg acctatgacg acggaagcac aagactg 47

<210> 96
<211> 21
<212> DNA
<213> Artificial Sequence

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